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**Mixing TCP And Satellites: A View From Above**  
*(Irreverent Confessions From The Standards Trenches)*

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## Why Are Open Protocol Standards Important?

- **The Vision:**
  - Cheaper, better, faster
  - Risk reduction & stability
  - Interoperability
  - Efficiency
- **Potential Problems In Realizing The Vision:**
  - Broad applicability not recognized
  - Flexibility contends with simplicity
  - Deployment into an installed base
- **Do You Get A "Big Tent" Solution Or Just A "Big Top" Oddity?**
  - Candor, industry participation and feedback will make the difference
- **A Parable For Our Times: Should The Tail Be Wagging The Dog?**

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## Protocols Are Like Galoshes: One Size Does *Not* Fit All

- **The Dynamic Range Of Network Environments Is Larger Than Ever**
  - Satellite networks mirror the full spectrum: wireless to fiber, mobile to static
  - Environments are Opaque: “On the Internet, nobody knows you’re In orbit”
- **You Probably Own Only Part Of The Railroad**
  - Actions at a distance can affect your bottom line performance
    - TCP Loss recovery is expensive and retransmissions are not always free
    - Loss recovery is inherently unfair to long(er) paths
  - Localized performance tuning keeps the trains running on-time
    - Spoofing and proxies: The benefits of impedance matching
    - Balancing security, transparency and the end-to-end argument
- **Seamless Integration Is A Matter Of Perspective (Theory and Practice)**
- **Bottom line For Performance And Efficiency In The Near Term:**  
Tailor Your Solutions, Do So With *Standardized* Mechanisms Appropriate To The Environment

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